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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,774	10/22/2003	Scott H. Gillis	14072-035001 / W 616	1593
26161	7590	03/28/2006	EXAMINER	
FISH & RICHARDSON PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			PAK, JOHN D	
			ART UNIT	PAPER NUMBER
			1616	
DATE MAILED: 03/28/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/690,774	<b>Applicant(s)</b> GILLIS ET AL.	
	<b>Examiner</b> JOHN PAK	<b>Art Unit</b> 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-27 are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                                        |                                                                                         |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.                                                |

Claims 1-27 are pending in this application.

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-4, 10-18, 24-27, drawn to a nano/crystalline material, wherein the nano/crystalline material is an atomically disordered, crystalline material and said material is in the form of a free-standing powder.
- II. Claims 1-2, 4-8, 10-16, 18-22 and 24-27, drawn to a nano/crystalline material, wherein the nano/crystalline material is an atomically disordered, crystalline material and said material is in the form of a solution, aerosol, tape, pill, capsule, tablet, lozenge or suppository.
- III. Claims 1-2, 4, 9-16, 18, 23-27, drawn to a nano/crystalline material, wherein the nano/crystalline material is an atomically disordered, crystalline material, and said material is in the form of an article including a substrate and a coating and said material is in the coating.
- IV. Claims 1-4, 10-14, drawn to a nanocrystalline material, wherein the nanocrystalline material is not an atomically disordered, crystalline material and said material is in the form of a free-standing powder.
- V. Claims 1-3, 5-8, 10-14, drawn to a nanocrystalline material, wherein the nanocrystalline material is not an atomically disordered, crystalline material and said material is in the form of a solution, aerosol, tape, pill, capsule, tablet, lozenge or suppository.

- VI. Claims 1-2, 4, 9-14, drawn to a nanocrystalline material, wherein the nanocrystalline material is not an atomically disordered, crystalline material, and said material is in the form of an article including a substrate and a coating and said material is in the coating.

Further, claims 1-13, 14-25 and 27 are generic to the following disclosed patentably distinct species: metal, such as silver, bismuth, antimony, mixture of silver + copper, etc. The species are independent or distinct because each metal or group of metals (noble metals, Ag, Au, Pd, Pt) are distinct due to their different status as different elements. Applicant is required under 35 U.S.C. 121 to elect a single disclosed species, even though this requirement is traversed. Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Given the extremely broad scope of the subject matter encompassed by applicant's claims, the Examiner reserves an opportunity to reconsider the instant restriction requirement if

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the claims and claim presentation structure are substantially amended in subsequent responses by applicant.

The classification of the various inventions as set forth above spans all over classes 424 and 514, depending on the specific metal, specific form and specific article. The six patentably distinct inventions are conservative in the number of distinct inventions when one considers the fact that the independent claims read on compounds of about 80% of the first 103 elements of the Periodic Table. The inventions are distinct because they utilize multiple distinct composition forms, distinct substances and distinct substance characteristics.

There would be undue burden in having to search more than one invention group. In fact, there would be serious burden even with just one invention group due to the extremely broad scope of the inventive subject matter. For example, Group I reads on free standing powders of major compounds of 80% of the first 103 elements that may have some atomic disorder. Undue burden is plain from the scope of search and examination demands of this application.

For these reasons, the restriction requirement as set forth is deemed to be proper.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and

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specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to JOHN PAK whose telephone number is (571)272-0620. The Examiner can normally be reached on Monday to Friday from 8 AM to 4:30 PM.


If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's SPE, Sreeni Padmanabhan, can be reached on (571)272-0629.

The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JOHN PAK  
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